

BEFORE THE OFFICE OF THE COMMISSIONER OF RAILROADS

STATE OF WISCONSIN

In the Matter of the:

Petition of the Village of Mt. Pleasant for the Alteration of a Public Crossing of the Union Pacific Railroad Co. Tracks with STH 20 North Frontage Road in the Village of Mt. Pleasant, Racine County

9040-RX-1226

FINAL DECISION

By letter dated February 3, 2006, the Village of Mt. Pleasant petitioned the Office of the Commissioner of Railroads (OCR) for the alteration of a public crossing of the Union Pacific Railroad Co. (UP) New Line tracks with STH 20 North Frontage Road in the Village of Mt. Pleasant, Racine County (crossing no. 176 873J / MP 61.95).

At the hearing, the Village withdrew its request to exempt the crossing from the stopping requirement of §346.45, Stats. That section requires certain specified vehicles, such as fuel trucks and school buses, to stop at highway/rail crossings unless posted with an exempt sign.

Jurisdiction: Secs. 86.13, 195.28 and 195.29, Stats.

Pursuant to due notice, public hearing was held in this matter on March 8, 2006 in Mt. Pleasant, Wisconsin with hearing examiner Douglas S. Wood presiding.

On April 24, 2006, the hearing examiner issued a proposed decision. The OCR received no comments on the proposed decision. The Commissioner adopts the proposed decision as final without change.

Appearances:

**Parties**

Village of Mt. Pleasant, Petitioner  
by  
Mark Schmalz, PE  
Village Engineer  
6126 Durand Avenue  
Racine, WI 53406

As Interest May Appear:

Union Pacific Railroad Co.  
by  
Brian D. Baird, Attorney  
735 North Water St., Suite 1500  
Milwaukee, WI 53202-4188

Wisconsin Department of Transportation, Petitioner  
by  
Gregory A. Baer, PE  
Railroad Project Coordination Engineer  
PO Box 7914  
Madison, WI 53707-7914

#### Findings of Fact

#### THE COMMISSIONER FINDS:

The Village plans to widen STH 20 North Frontage Road from a 2-lane rural roadway about 32' in width including shoulders to a 2-lane urban roadway 48' wide between face of curbs. The total project length is about 6000'. The crossing is located about 1200' from the east end of the project.

STH 20 North Frontage Road is 24' wide with 3' to 10'-wide shoulders. It is 32' wide between the outside edges of the shoulders at the crossing and intersects the tracks at an angle of 90°. The crossing consists of one mainline track. The reconstructed roadway will be 48' between the face of curbs and will intersect the tracks at an angle of 90°. The roadway will continue to operate as a 2-lane roadway for the time being, however, it could be converted to 4-lane operations by simply changing the pavement markings. The Village plans to add a sidewalk and bike path at some unspecified future date, but not as part of this project.

STH 20 North Frontage Road carries 6000 ADT (average daily traffic). The Village projects STH 20 North Frontage Road will carry 11,000 ADT in the design year of 2026. The speed limit is 35 mph.

The present crossing has a timber-plank and asphalt surface in poor condition. The Village proposes a concrete panel crossing surface, which is warranted based on the traffic volume.

The railroad currently operates 18 through train movements per day over the crossing location at a speed of 50 mph. The railroad also operates 4 switch movements per day at lower speeds.

A driver traveling at 35 mph needs a distance of 281' to stop safely. The crossing is visible from more than 281' in each direction. Assuming a train speed of 50 mph, a driver traveling at 35 mph needs to see a train when it is 510' from the crossing from a point 281' down the highway. The sight distance available is adequate in the northwest and southeast quadrants, but is inadequate in the southwest and southeast quadrants (only about 100').

At all crossings, except those with gates, a driver stopped 15' short of the near rail must be able to see far enough down the track, in both directions, to determine if sufficient time exists for moving their vehicle safely across the tracks to a point 15' past the far rail, prior to the arrival of a train. Required clearing sight distance along both directions of the track, from the stopped position of the vehicle, is dependent upon the maximum train speed and the acceleration characteristics of the "design" vehicle. The necessary clearing sight distance at the STH 20 North Frontage Road crossing is 1120'. The available clearing sight distance is inadequate in the southwest and southeast quadrants (about 150').

The exposure factor at this crossing is about 132,000. The exposure factor at this crossing will exceed 242,000 in the design year assuming 22 train movements per day. The exposure factor equals the product of the number of trains per day and the number of highway vehicles per day, which yields a numerical value for the potential conflicts each day at the crossing.

Two train-vehicle accidents have occurred at this crossing since 1973. The accidents occurred in 1977 and 1995.

Accidents that do occur here will likely be quite serious if a through train is involved due to their 50 mph speed. Train speed is strongly correlated with fatalities in train/vehicle accidents. More specifically, crossings with train speeds of 40 mph and over have a disproportionate number of fatalities. According to Federal Railroad Administration (FRA) statistics, nationally, in 1994 71% of fatalities occurred at crossings with train speeds of 40 mph+, even though only 26% of all crossings had train speeds of 40 mph+.

The Wisconsin Department of Transportation has produced a benefit-cost analysis for all at-grade crossings in the state. Installing new automatic flashing lights with gates and constant warning time circuitry at the STH 20 North Frontage Road crossing has a net benefit of about \$429,000.

The crossing presently has 8" mast-mounted incandescent automatic flashing lights for warning devices. These warning devices will not be adequate for the widened roadway. In order to adequately protect public safety, cantilevered 12" LED automatic flashing lights with gates and constant warning time circuitry are needed based on the new width of the roadway and the inadequate clearing sight distance.

*Constant warning time circuitry* adjusts for train speed and causes the crossing signals to always operate for the same amount of time before the train reaches the crossing, regardless of train speed. A motion detector simply detects the train operation, but does not adjust for train speed so that the amount of warning time varies based on train speed.

*Light emitting diodes (LED)* lamps replace incandescent bulbs. LEDs have higher conspicuity, a wider cone of vision, and longer life than incandescent lights. LEDs are especially useful on east-west roadways where the rising and setting sun may make the signals difficult to see.

In summary, the alteration of the crossing at-grade of the UP tracks with STH 20 North Frontage Road will promote public safety and convenience.

**Crossing Costs:** The existing crossing is 32' in length. The new crossing will be 48' in length. The railroad has a statutory duty to maintain the existing crossing. In accordance with the OCR's standard practice, the cost for the new crossing shall be apportioned based on the pro-rated width of the existing to new crossing lengths. The UP shall bear 66.7% and the Village 33.3% of the cost to install the new concrete panel crossing.

The Village proposed that the UP bear all of the cost for the crossing construction. Such apportionment would be contrary to the OCR's long-standing practice of pro-rated apportionment and would be fundamentally unfair. The Village roadway project is necessitating the widening of the roadway and the railroad receives no benefit from the widening. Indeed, the railroad incurs additional future maintenance responsibility because it will have a statutory duty to maintain the widened crossing.

**Signal Costs:** The signal materials and installation shall be split as follows: The DOT will obtain two estimates from the railroad; one based on new mast-mounted automatic flashing lights with gates for the existing roadway width and a second estimate based on the installation of cantilevered automatic flashing lights and gates. The Village shall pay the incremental cost of cantilevered signals over mast-mounted signals.

Under the OCR's standard practice, the Village would be expected to pay the entire cost of the new signals because the roadway project is generating the need for new warning devices. However, prior to becoming aware of this roadway project, the OCR and the railroad had developed a project to split the cost to relocate salvaged lights and gates to this crossing. With the widening of the roadway those salvaged signals will not fit this crossing thus new cantilevered signals and gates are needed. The OCR order provides for the State of Wisconsin and the Union Pacific Railroad Co. to contribute most of the costs for the new warning devices. Because cantilevered signals and gates cost more than mast-mounted signals and gates, the order also requires the Village to pay the marginal cost of cantilevered signals and gates.

More specifically, the order provides that the Village shall pay the incremental cost of cantilevered signals over mast-mounted signals as determined by the UP signal estimates, the State of Wisconsin shall pay 80% and the Union Pacific Railroad Co. shall pay 20% of the remaining cost.

This signal project is part of a larger corridor review of crossings in Racine County on the UP that includes the potential closure of the Gittings Road and Spring Street crossings. Closure of any crossing requires a public hearing. The investigation and hearing with respect to these potential closures will be conducted under a separate docket. A separate notice will be issued by the OCR at a later date.

**Timing:** The Village originally proposed to construct the roadway through the crossing in 2006. Given the lead time required by the UP, that schedule is not practicable. Preferably, the Village will delay the segment of the project that encompasses the crossing. The crossing will not be widened or have new warning devices until 2007.

#### Ultimate Conclusions on the Issues

##### THE COMMISSIONER CONCLUDES:

1. That the alteration of the crossing at-grade of STH 20 North Frontage Road with the Union Pacific Railroad Co. tracks in accordance with the design plans of the Village of Mt. Pleasant in the Village of Mt. Pleasant, Racine County will promote public safety and convenience.

2. That in order to adequately protect and promote public safety, it is necessary to install and maintain cantilevered 12" LED automatic flashing lights with gates.

3. That it is reasonable that the Union Pacific Railroad Co. bear 66.7% of the cost for the crossing construction.

#### Conclusion of Law

##### THE COMMISSIONER CONCLUDES:

That the jurisdiction of the Office of the Commissioner of Railroads under §§86.13, 195.28 and 195.29, Stats., extends to this matter. Accordingly, the Office enters an order consistent with the findings of fact.

#### Order

##### THE COMMISSIONER ORDERS:

1. That the **Union Pacific Railroad Co.** shall install and maintain a concrete-panel crossing at-grade of STH 20 North Frontage Road with its tracks in accordance with the design plans of the Village of Mt. Pleasant in the Village of Mt. Pleasant, Racine County by **October 31, 2007**. (Crossing No. 176 873J / MP 61.95)

2. That the **Union Pacific Railroad Co.** shall install and maintain cantilevered 12" LED automatic flashing lights with gates, constant warning time circuitry, and other appropriate appurtenances in accordance with such plans as are filed with and approved by the Office of the Commissioner of Railroads at the crossing of its tracks with STH 20 North Frontage Road at-grade in the Village of Mt. Pleasant, Racine County by **October 31, 2007** (Crossing No. 176 873J / MP 61.95).

3. That the **Union Pacific Railroad Co.** shall submit to the Office of the Commissioner of Railroads signal and circuit plans with the cost estimate of its proposed installation and upon completion of the signal project, a detailed statement of the actual cost to the Office and to the Wisconsin Department of Transportation.

4. That the signal installation work herein ordered shall not begin until the regional office of the Wisconsin Department of Transportation informs the railroad that they may start such work and such start notice will not be issued until appropriate federal aid or other funding arrangements have been assured. The cost of the new project initiated before the start notice will not be reimbursed with public funds and shall be the responsibility of the railroad.

5. That to the extent feasible the **Union Pacific Railroad Co.** shall re-use the existing signal equipment.

6. That the **Village of Mt. Pleasant** shall not open STH 20 North Frontage Road at the railroad crossing to unrestricted public use until the installation and activation of the cantilevered automatic warning devices ordered above.

### **Crossing Construction Costs**

7. That the **Union Pacific Railroad Co.** shall bear 66.7% of the cost of the crossing construction. The **Village of Mt. Pleasant** shall bear the remaining costs, except for any cost assessed to the railroad pursuant to §195.60, Stats., for the investigation of this matter by the Office. The railroad shall not pass on those assessment costs either directly or indirectly.

### **Signal Costs**

8. That the **Union Pacific Railroad Co.** shall provide signal cost estimates to the Wisconsin Department of Transportation by the Union Pacific Railroad Co. for new mast-mounted automatic flashing lights with gates and a second estimate based on the installation of cantilevered automatic flashing lights and gates.

9. That the **Village of Mt. Pleasant** shall pay the incremental cost of cantilevered signals over mast-mounted signals based on the cost estimates provided to the Wisconsin Department of Transportation by the Union Pacific Railroad Co. as required in paragraph 8, above.

10. That the **State of Wisconsin** shall pay 80% and the **Union Pacific Railroad Co.** shall pay 20% of the remaining cost of the crossing signal materials and labor not paid by the Village of Mt. Pleasant under paragraph 9. In addition, the **Union Pacific Railroad Co.** shall pay any cost assessed to the railroad pursuant to §195.60, Stats., for the investigation of this matter by the Office. The railroad shall not pass on those assessment costs either directly or indirectly.

11. That jurisdiction is retained.

Dated at Madison, Wisconsin, (May 12, 2006).

By the Office of the Commissioner of Railroads.

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Rodney W. Kreunen  
Commissioner of Railroads

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